DOCUMENT RESUME

ED 197 260 CG 014 909

AUTHOR Wirtenberg, Jeana
TITLE Expanding Girls' Occupational Potential: A Case Study of the Implementation of Title IX's Anti-Sex Segregation Provision in Seventh Grade Practical Arts.
PUB DATE 3 Sep 80
NOTE 11p.: Paper presented at the Annual Convention of the American Psychological Association (88th, Montreal, Quebec, Canada, September 1-5, 1980). Best copy available.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents: Comparative Analysis: *Cultural Influences: Educational Legislation: *Equal Education: *Females: Grade 7: Junior High Schools: *Occupational Aspiration: Parent Attitudes: Practical Arts: Sex Role: *Sex Stereotypes: *Student Teacher Relationship
IDENTIFIERS *Title IX Education Amendments 1972

ABSTRACT

Title IX has significant implications for overcoming generations of inequality in the educational opportunities that have been afforded to females. The sex-desegregation of industrial arts and home economics was examined to measure the impact of Title IX on the occupational potential of seventh-grade girls and boys. In the experimental condition, 60 girls and 80 boys in one school were required to take six coed modular units: metal, wood/drafting, electric, graphic arts, cooking and sewing. In the comparison condition, the girls (N=56) took a semester of cooking and a semester of sewing, while the boys (N=63) took a four-quarter sequence of shops. While experimental girls felt more competent than comparison girls in traditionally male domains and perceived fewer differences between men and women at the beginning and end of the year, the differences between the experimental and comparison girls' scores at the end of the year could be almost entirely accounted for in test results at the beginning of the year. Teachers interacted more with boys than with girls in the coed modules and manifested sex-role stereotyped attitudes. Parents' occupational expectations were strongly based in sex-role stereotyping and were strongly associated with their children's own assessments. Thus, sex-desegregation is a necessary but not sufficient condition for promoting girls' occupational potential. Sex-stereotyped expectations on the part of students, parents, and teachers all need to be dealt with to overcome the cultural forces that continue to place limits on women's occupational attainment. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED197260

BEST COPY AVAILABLE

EXPANDING GIRLS' OCCUPATIONAL POTENTIAL: A CASE STUDY OF THE IMPLEMENTATION OF TITLE IX'S ANTI-SEX SEGREGATION PROVISION IN SEVENTH GRADE PRACTICAL ARTS

Jeana Wirtenberg, Ph.D.
Team Leader
Social Processes/Women's Research
National Institute of Education
Washington D.C. 20208

Invited Address: Social Issues Dissertation Award First Prize Recipient at the 88th Annual Convention of the American Psychological Association, Montreal, Quebec, Canada, September 3, 1980.

Complete dissertation can be ordered through:

University Microfilms International
300 N. Zeeb Road
Ann Arbor, Michigan 48106

Order No. 79-15,689 ($16.50 Xerographic/paperback, $8.50 microfilm)

CG 014909

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Jeana Wirtenberg

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Title IX of the Education Amendments of 1972 states that: "No person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance."[1] As the first piece of comprehensive anti-sex discrimination legislation to concern students, Title IX has significant implications for overcoming generations of inequality in the educational opportunities that have been afforded to females. Moreover, because it is clear that educational opportunities are a critical filter to occupational opportunities, the legislation also has far-reaching implications for promoting occupational equality by altering the highly sex-typed distribution of men and women across the spectrum of occupations.

The purpose of this study was to examine, as comprehensively as possible, the sex-desegregation of industrial arts and home economics which is now mandated by law under Title IX. The primary objective was to measure the impact of this change on the occupational potential of the girls, who for the first time are being required to take the traditionally male shop classes. The secondary objective was to discover the impact on boys of the same program, where they are taking the traditionally female cooking and sewing courses for the first time in addition to industrial arts.

While this was the specific purpose of the study, an even larger purpose was to generate recommendations for promoting the effectiveness of Title IX implementation, which is only now getting underway.

1. Education Amendments of 1972 Sections 901-907, 20 U.S.C. Sections 1681-86 (1972)

To achieve these purposes, the study was designed to shed light on aspects of teachers' attitudes and behavior which may mediate and possibly undermine the effectiveness of sex-desegregation, particularly for girls. Similarly, parents' attitudes and expectations were examined to suggest patterns of relationships between theirs' and their children's occupational aspirations. These were analyzed so as to form the basis for recommendations so that parents and teachers can contribute to the expansion of youngsters' job options by enhancing the positive impact of the program.

Because a major obstacle to maximizing individual potential occurs through a process of sex-typing certain abilities, interests, and occupations, a major focus of this study was on the extent to which the new program would reduce such sex-typing. That is, whether it would enhance girls' interests and sense of competence in traditionally male areas, and enhance boys' interests and sense of competence in traditionally female areas. If this occurs (without diminishing interest in traditional areas) the net effect would be an increase in the number of vocational options considered by both girls and boys.

The design for the study was a three factor nonequivalent control group design with repeated measures on one factor. In the experimental condition students in one school were required to take six coed modular units, namely, metal, wood/drafting, electric, graphic arts, cooking

The sample consisted of 259 subjects, with 140 in the experimental group (60 girls and 80 boys), and 119 in the comparison group (56 girls and 63 boys). These represented all of the students in the two schools who were present on the days of both Phase I and Phase II testing, except for a randomly selected subset of subjects (N=227) who participated in a parallel study which assessed the courses' impact on performance measures of spatial abilities and math aptitude.[2] There was also a second control group, consisting of 27 girls in the experimental school who were assigned by the counseling office to a sex-segregated home economics program (cooking and sewing only). The scores of five girls who had gone to considerable trouble to enroll themselves in the otherwise all-male shop classes in the comparison school were also examined and compared with those of the other groups of girls.

A parent sample consisted of a total of 208 mothers and fathers who responded to the parent questionnaires described below.

All students were administered three paper-and-pencil questionnaires at the beginning (Phase I) and again at the end (Phase II) of the 1974-1975 school year: (1) The Self-Directed Search (SDS) Form E; (2) Children's Sex-Role Self-Concept Scale (SRSC); and (3) Attitudes toward increased social, economic, and political participation by women scale. In addition, actual course choices for eighth grade

2. Rose Ann Alspektor, "The differential effects of a sex-desegregated and sex-segregated Practical Arts program on mathematics performance, attitudes towards mathematics and spatial ability in seventh grade girls and boys" (Undergraduate Honors Thesis, University of California at Los Angeles, Psychology Department, 1975).

electives were ascertained from the counseling office at the end of the school year. Students' grades were copied from teachers' roll books after each module.

Actual classroom procedures were observed for a period of five months during the school year (December through April). Each of the six experimental teachers was observed once a week for one hour over a period of twelve weeks. A modified version of the observational scales developed by Robert Spaulding was used to classify teacher-pupil interactions into three categories: approval, disapproval, and instruction. The observer also noted the direction of the teachers' communications (either the class, boys, or girls), and any remarks that could be classified as sex-stereotyped characterizations or comments, as well as the use of sexist and nonsexist language.

The classroom observations allowed for the comparison of the teachers' interactions with the girls and the boys in the same class, to see if there was an equivalent quantity and quality of teacher-pupil interactions.

Each of the twelve teachers who participated in the research was also given a set of attitude measures, assessing their views about sex-desegregated Practical Arts, sex-role attitudes, and a questionnaire about the relative importance of practical arts skills to girls and to boys.

Parental expectations and attitudes about appropriate roles and occupations for males and females were assessed by two questionnaires: the Parents Occupational Expectations for Your Child Questionnaire which examined how successful parents think their child would be in a wide range of occupations, and the Practical Arts Skills Questionnaire which focussed on the relative importance of the skills taught in practical arts to girls vs. boys.

Students' scores on each of the dependent variables were first analyzed with repeated measures analysis of variance with Phase I and Phase II scores as the repeated measure, sex and treatment group as the other two independent variables. This analysis revealed a number of significant effects due to group, sex, phase of testing, and the interactions among these factors. It also suggested many unexpected differences between the experimental and comparison groups at Phase I for both girls and boys, respectively. Oneway analysis of variance of girls' Phase I scores indicated that the experimental girls attributed significantly more competence to themselves in traditionally male domains (e.g., mechanical and scientific), perceived less of a difference between men and women, and attributed significantly more traditionally male personality characteristics to themselves (e.g., assertive, logical) than the comparison girls. Moreover, the experimental girls indicated greater liking for activities and occupations in mechanical, scientific, and enterprising areas. While these differences were hypothesized at Phase II testing (after the course implementation), they were not anticipated so soon after the sex-desegregated program was first introduced.

Furthermore, several of these group differences were still evident at Phase II, indicating that in contrast to the comparison girls, the experimental girls still attributed more male personality characteristics to themselves and saw less of a difference between men and women after having gone through the traditionally male shop classes. However, when an analysis of covariance was performed on these significant Phase II effects, with the Phase I scores as the covariate, the Phase II differences were no longer statistically significant, indicating that the differences between the experimental and comparison

girls' scores could be almost entirely accounted for at Phase I testing. Interestingly, the results for the boys were in many ways analogous to those for the girls.

As expected and consistent with previous research, large sex differences were found on every measure, indicating that males and females differ in their sex-role self-concepts, sense of competence across the spectrum of occupations and corresponding skill categories, in their interests in activities and occupations, attitudes towards equality for men and women, and in their desire for subsequent education in traditionally male and traditionally female areas (i.e., elective course choices).

Although no sex differences were predicted in academic grades in any of the modules, the girls were found to score higher than the boys in three out of the six modules (including two industrial arts courses), and to score as well as the boys in the other three.

The findings were also consistent with the prediction of a generally increasing sense of competence, as well as an increasing number of interests in activities and occupations during the seventh grade. Surprisingly, though, and opposite to predictions, the sense of competence of the experimental girls (in traditionally male domains) was found to increase more slowly than the comparison girls, and the sense of competence of the experimental boys (in traditionally female domains) was found to increase more slowly than the comparison boys across the school year. However, since the experimental students started off the year (at Phase I) with scores generally higher than their respective comparison groups, they were still scoring higher on most measures at

the end of the year (Phase II).

All predictions were upheld with regard to teacher-pupil interactions and teacher attitudes. There was a tendency for some teachers to interact more with the boys than with the girls in the sex-desegregated practical arts modules, and also to manifest sex-role stereotyped attitudes and expectations with regard to the relative importance of industrial arts and home economics to boys and to girls. In particular, the experimental teachers manifested a slight but mixed tendency to interact more with boys than girls in the instructional and approval categories, and a strong, consistent tendency to direct more disapproval to boys than to girls.

Teachers also exhibited sex-role stereotyping in the content of their remarks, language usage, within classroom separation of girls and boys, and choice of curriculum. Also consistent with predictions, few differences were found between male and female teachers on any of these dimensions. Tentative support was provided for a direct relationship between teachers' sexist attitudes and related behaviors.

Based on limited returns, the parent data demonstrated that both mothers and fathers: (1) place less importance on industrial arts for their daughters' education as compared to their sons, and at the same time, place less importance on home economics for their sons as compared to their daughters; (2) view practical arts, including both home economics and industrial arts as much less valuable to their childrens' education than academic subjects; (3) have expectations for their childrens' ability to be successful across the spectrum of occupations that are strongly based in sex-role stereotyping; and (4) have

occupational expectations for their children which are significantly and strongly associated with their childrens' own assessments of their occupational interests, and sense of competency.

The students' Phase I findings are interpreted as indicative of the power of institutionalized and programmatic changes to induce immediate changes in self-perceptions and attributions about competencies and interests. Several alternative explanations, stemming from theories of social expectations, are provided for both the Phase I and Phase II findings. The explanations simultaneously draw from the theoretical literature and the empirical data collected in the classrooms in this study. The thrust of the explanations is that the present approach to implementation of Title IX's anti-sex segregation provision, while it is a step in the right direction, is alone insufficient for fulfilling the promise of Title IX. Thus, the study showed that it is not enough to legislate sex-desegregation of classes, and then be satisfied when previously all-boys' industrial arts classes are opened up to girls, and previously all-girls' home economics courses are opened to boys. Sex-stereotyped attitudes, expectations, and behaviors in the students themselves, as well as on the part of their parents, teachers, and counselors (and also in the courses' projects and instructional materials) all need to be reckoned with to overcome the cultural forces that have for so long placed limits on the occupational attainment of women by channeling them into traditionally female occupations and away from traditionally male occupations.

Research recommendations ranged from large scale national studies

to smaller and more intensive case studies of varying strategies to Title IX program implementation. Similarly, policy recommendations varied from those that are appropriate for the consideration of national leaders and organizations to those that may be undertaken by state and local educational agencies. For example, it was recommended that the Office of Civil Rights, DHEW focus greater emphasis on the sex-desegregation of junior high school practical arts and the monitoring of Title IX compliance. At the same time, attention should be paid to the subtle forms of bias revealed in this study, such as within class sex-segregation and inappropriateness of curriculum.

At the state level, a major recommendation was that all teachers and administrators of newly sex-desegregated industrial arts and home economics courses be required to participate in either pre-service or in-service training to increase their sensitivity to subtle forms of sex-bias as well as to provide them with the resources and skills so they can modify their curriculum to be fair and interesting to both sexes. At the same time, steps should be taken to insure that the textbooks and instructional materials being used in industrial arts and home-economics are sex-fair.